## Best Available CODY UNITED STATE EPARTMENT OF COMMERCE Patent and Transmark Office Address: COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

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APPLICATION NUMBER	FILING DATE		FIRST NAMED	APPLICANT	ATTY, DOCKET NO.
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Since this application is	oran in this CMA s in condition for al	an aution: lowance except	for formal matt	ers, <b>prosecution as t</b>	the merits is closed in
accordance with the pr	actice under Ex pa ent may not be deta	<b>urte Quayle, 193</b> lined though the	5 D.C. 11; 453 mventing is not	O.G. 213. Identically disclosed of	r described so set forth in
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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the 1. basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.
- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness 2. rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- Claims 1, 3-6 and 8-9 are rejected under 35 U.S.C. 102(b,e) as being anticipated by Parker 3. et al.

Parker et al is directed to a beam producer said to be "sonar/ultrasound/swept frequency vibration or audio source with subsequent Doppler shift analysis (Col. 7 lines 9-14 and 24-38) by the use of a vibration function generator 100 which has adjustable frequency and signal shape (Col. 8 lines 6-17) and object vibration detection is by either Doppler or B-modes.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al as 4. applied to claim 1 above, and further in view of Sarvazyan ('565), Col. 1 lines 60-63 which

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teaches the equivalence of MRI to the ultrasound used in Parker et al in the imaging of tissue motion.

- Claims 1, 4-5 and 9 are rejected under 35 U.S.C. 102(b,e) as being anticipated by Bowen. 5. Bowen includes disclosure of use of pulse-modulated ultrasound to induce thermal stresses which in turn are ultrasonically imaged by a detector, Col. 3 line 62-Col. 4 line 39 for example. Since a pulse is inherently a form of amplitude modulation the base claim 1 is met. Since the thermal stress manifests as expansion the detection is effectively of a form of motion and therefore claim 5 is met.
- Claims 1, 4-5 and 9 are rejected under 35 U.S.C. 102(b,e) as being anticipated by 6. Shimura et al or Sato et al.
- Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimura et al or Sato et al as applied to claim 1 above, and further in view of Sato et al (Acoustic Imaging V20 article pgs. 9-18, of record.)
- 8. The two patents which differ with respect to through transmission ('460) and reflective transmission ('255) are both directed to pulse amplitude (modulation) to provide a pump pulse e.g. Fig. 7(c) of the latter which pulse is directed at the patient, and a detector system (ultrasonic phase detection and/or display) which serves as a carrier for the object motion signal out of the body. With respect to claim 2, the Sato et al article establishes that an audio output would be the equivalent of a display or recording since the patents' technology is effectively a form of percussion which was heretofore audibly observed.

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Claims 1, 3-9 are rejected under 35 U.S.C. 102(b,e) as being clearly anticipated by 9.

Sarvazyan.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sarvazyan as 10.

applied to claim 1 above, and further in view of Sato et al (Acoustical Imaging Vol. 20 article).

Insofar as the latter establishes the equivalence of acoustic force provision to percussion wherein

audible output is a simple and effective output modality for a user.

Any inquiry concerning this communication should be directed to Examiner Francis J.

Jaworski at telephone number (703) 308-3061.

**Primary Examiner**